SPI SPECIALTY PRODUCTS, INC.
SEAMLESS SOLUTIONS FOR OVER 40 YEARS

ELASTAFLEX™ HP UB

ELASTOMERIC POLYUREA
PRELIMINARY

DESCRIPTION

ELASTAFLEX™ HP UB is a unique blend of aliphatic and aromatic polymer chemistry with greater color/gloss retention and is more UV resistant than aromatic polyureas*. ELASTAFLEX™ HP UB is a very economical 100% pure polyurea which exhibits very high tensile strength and elongation. ELASTAFLEX™ HP UB was stretched to twice the samples original length at 30 times per minute, more than 530,000 times before breaking. ELASTAFLEX™ HP UB is formulated with SPI's cutting-edge ULTRA BOND™ technology. SPI's advanced ULTRA BOND™ chemistry is coined "the duct tape molecule". ULTRA BOND™ has the unique advantage of adhering to most properly prepared organic and inorganic (new and aged) surfaces without requiring a primer. Like duct tape, ELASTAFLEX™ HP UB with Ultra Bond™ gains adhesion over time.

FEATURES

- Manufactured with high pigment loading for enhanced color stability and gloss retention.
- Extended gel time for better flow-out providing a smooth, more uniform finish and better substrate penetration.
- Forms a monolithic membrane that can be handled and walked on within minutes from the time it's sprayed.
- Compliant with FDA/USDA for incidental food contact.
- ELASTAFLEX™ HP UB liner is very supple with minimal shrinkage.
- Class 1 Fire Rating: ASTM E84-97a complies with NFPA and UBC.
- 100% solids, no solvents, and zero VOCs.

RECOMMENDED USES

- Liner for concrete tanks, ponds, lagoons, reservoirs, dikes, tunnels, barges, etc.
- Roof coating used over metal, polyurethane foam, concrete, and certain single ply membranes.
- Coating for steel or other substrates exposed to corrosion.
- Encapsulation for EPS or other types of flotation materials.
- Replace or repair failed existing sheet membrane liners, steel tanks, silos, and pipes.
- In between slab waterproofing.
- Encapsulation of asbestos, lead paint, or other dry hazardous materials (Consult SPI).
- Earthen containment used with geotextile membranes.

COLORS

ELASTAFLEX™ HP UB is available in standard colors (*Manila, and Light Grey) Sand, Medium Grey, and Black. Custom colors available upon request. Aluminized ELASTAFLEX™ HP UB is also available under the name ELASTAFLEX ARC™. Note: ELASTAFLEX™ HP UB in continuous full-light exposure, white or very light colors will change over a period of time. Aliphatic urethane and other suitable topcoats can be used where long-term aesthetics are of critical importance.

DRY PROPERTIES

Tensile Strength ASTM D638	± 3,150 psi (22 mpa)
Elongation ASTM D638	± 630%
Hardness (Shore A) ASTM D2240-81	80 ± 5
Hardness (Shore D) ASTM D2240-81	33 ± 5
100% Modulus ASTM D412	572 psi (4 mpa) ± 10
300% Modulus ASTM D412	1,071 psi (7 mpa) ± 10
Tear Resistance ASTM D624	314 PLi (55.00 KN/m) ± 50
Service Temperature	-60° - 300°F (-50° - 148°C)

*All cured film properties are approximate since processing parameter, ad-mixture types, and quantities change physical properties of the cured elastomer. All samples for above tests were force cured 48 hours or aged for more than three weeks. It is recommended that the user perform their own independent testing. Samples tested were neutral (untinted). The samples for tests were sprayed with Graco HXP3 at 45 mils (1.1 mm), 2900 psi (20 mpa) dynamic pressure at gun. Graco MP Fusion gun with 29/29 mixing module and 0.04 ceramtip.. Primaries/Hose Heat 170°F (77°C).

PACKAGING

This product sold in standard 110 gallon drum and 550 gallon tote sets. Available in other container sizes, contact sales representative for further information. Non-standard containers may require a longer lead time.

WET PROPERTIES

Solids by Volume	100%
Solids by Weight	100%
Volatile Organic Compounds	0 lbs/gal (0 g/l)
Theoretical Coverage DFT	100 sq. ft. @ 16 mils/gal
Weight per gallon (approx)	8.75 lbs. (3.98 kg)
Number of coats	1 - 2
Mix Ratio	1 "A" : 1 "B"
Viscosity (cps)	A: 400 ± 50 cPs B: 450 ± 50 cPs
Shelf Life Unopened Containers @ 60 - 90°F (15 - 32°C)	Six Months

Minimum/maximum material/container temperature is 70°F (21°C)

CURING SCHEDULE

Gel	± 10 sec
Tack Free	± 30 sec
Post Cure**	24 hour
Recoat	0 - 12 hours

**Complete polymerization to achieve final strength can take several days or weeks; depending on a variety of conditions.

TEST INFORMATION

FLAME SPREAD ASTM E84 @ 40 mils	Class I Passed 15	
SMOKE DENSITY ASTM E84 @ 40 mils	Class 1 Passed 30	
ABRASION RESISTANCE ASTM D4060 1000 g - 1000 cycles	H-18 wheel	110 mg loss
WEATHERABILITY (black) 3000 hours (QUV)	no evidence of failure	
MANDREL BEND ASTM D522-13	1/4" at -60°F Passed	

GENERAL APPLICATION INSTRUCTIONS

Apply ELASTAFLEX™ HP UB only to clean, dry, sound surfaces free of loose particles or other foreign matter. A primer may be required; depending on type and/or condition of the substrate. Consult technical service personnel for specific primer recommendations and substrate preparation procedures. ELASTAFLEX™ HP UB ™ can be sprayed over a broad range of ambient and substrate temperatures. Contact technical service personnel for specific recommendations, pricing, and availability of spray and auxiliary equipment. It is recommended that ELASTAFLEX™ HP UB be sprayed in multi-directional (north-south/east-west) passes to ensure uniform thickness. The polyol "B" component must be thoroughly power mixed each day, prior to use. Contact a SPI technician regarding proper mixing equipment. Follow the instructions attached to "A" and "B" containers.

RECOMMENDED EQUIPMENT SETTINGS

- Standard 1:1 ratio, heated, plural-component equipment developing a minimum of 1800 psi (13 mpa) dynamic pressure with heating capabilities to 170°F (77°C) will adequately spray ELASTAFLEX™ HP UB. These include Graco 20/35, 20/35 Pro, PMC GH-25-3, GH-40-35; PHX-25, PHX-40, H-3500, HV-20/35, Reactor E-XP1, E-XP2, H-25, H-40, H-XP2, and H-XP3. Gun's include Fusion MP, Gap Pro, Graco Fusion Air Purge, Glass Craft P2, P2 Elite, P2 Elite "C", P3, GX-7 DI, and GX-7-400 gun.
- Pre-heater temperature should be at 160-170°F (71-76°C).
- Hose temperature should be at 160-170°F (71-76°C). A hose thermometer inserted under the insulation near the gun should read a minimum of 145-155°F (63-68°C).
- Physical properties will be enhanced when sprayed at higher pressure (3000 psi or more) (21 mpa), utilizing an impingement mix gun such as the MP Fusion or GX7-DI.

MIXING & THINNING

The polyol "B" component must be thoroughly power mixed each day, prior to use. Contact a SPI technician regarding proper mixing equipment.

Thinning is not required. Using any thinner may adversely affect product performance

GENERAL SAFETY, TOXICITY & HEALTH

Safety Data Sheets are available for this coating material. Any individual who may come in contact with these products should read and understand the S.D.S. **CHEMTREC EMERGENCY NUMBER 1-800-424-9300**

WARNING: Contact with skin or inhalation of vapors may cause an allergic reaction. Avoid eye contact with the liquid or spray mist. Hypersensitive persons should wear protective clothes, gloves and use protective cream on face, hands and other exposed areas.

CLEAN UP: Use DPM, NMP, and Polyclean.

EYE PROTECTION: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mist or dusts. If contact is possible, the following protection shall be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazard exist, a full-face respirator may be required.

SKIN PROTECTION: Personal protective equipment for the body should be selected based on the task being performed; the risks involved, and should be approved by an industrial hygiene specialist before handling this product. Chemical resistant gloves complying with applicable health

and safety standards shall be worn when handling this product. Protective gloves are those made from butyl rubber, nitrile rubber or polyvinyl alcohol. Appropriate hazard assessments in conjunction with an evaluation of the protection factors of chemical resistant gloves shall be performed to ensure the protective properties remain intact. It is noted that the time to breakdown of protection factors for different glove manufacturers varies. In the case of mixtures, the protection factors of chemical resistant gloves may be impacted and deteriorate at unpredictable rates without understanding the impact of the substance and the specific protection factors of the chemical resistant gloves.

RESPIRATORY PROTECTION: Ensure adequate ventilation. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product, and the safe working limits of the selected respirator. Ensure the respirator is properly fitted.

INGESTION: Do not take internally. It is believed that ingestion of polymeric isocyanates would not be fatal to humans, but may cause inflammation of mouth and stomach tissue.

LIMITATIONS

This product is for professional use only.

This product must be stored at temperatures between 60—90°F (15—30°C).

Liquid temperature in drums during application 70—100°F (21—38°C).

Apply product when surface and air temperatures are above 40°F (5°C) and the surface temperature is at least 5°F (3°C) above dew point and rising.

Minimum material/container temperature for spray application is 70°F (21°C).

Avoid moisture contamination in containers. Containers should not be released if contamination is suspected. CO_2 created pressure can develop. Do not attempt to use contaminated material.

Undried air exposed to liquid components will reduce physical properties of the cured coating.

Note: The material supplied is a two component system (Component “A”/Component “B”) which is used to formulate this product. The quality and characteristics of the finished polymer is determined by the mixture and application of the two components.

WARRANTY & DISCLAIMER

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SPI Media

SSPC The Society For Protective Coatings

PDA

PMC POLYMAC-USA POLYURETHANE MACHINERY CORPORATION

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